

APPLICANT(S): AMIR, Nehemia
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AMENDMENTS TO THE CLAIMS

Please amend the claims to read as follows, and cancel without prejudice or disclaimer to resubmission in a divisional or continuation application claims indicated as cancelled:

1 – 11. (Canceled)

12. (Previously Presented) An acoustic noise reduction system for reducing the effects of a noise source, comprising:

input transducer means for sensing the acoustic noise field generated by the noise source and for generating an input signal therefrom;

output actuator means for generating an acoustic output field that is effective to reduce the level of the acoustic noise field;

correction means for adjusting the input signal generated by said input transducer to compensate for the non linear characteristics of said input transducer and output actuator;

echo cancellation means for removing from the input signal a portion of the output of said output actuator means fed back through said input transducer means, the output of said echo cancellation means representing a signal corresponding to substantially the noise source by itself; and

antinoise means for generating an antinoise signal opposite in phase to said input signal, said output actuator means generating said acoustic output field from said antinoise signal,

wherein said input transducer means is located in relatively close proximity to said output actuator means, and wherein said antinoise means comprises:

a variable gain amplifier operative to generate an amplified signal 180 degrees opposite in phase from said input signal; and

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gain control means for dynamically controlling the gain of said variable gain amplifier, wherein said gain control means is adapted to receive a manual input control signal from a user which determines the gain of said variable gain amplifier, said user able to vary the location of a quiet zone generated by said system by varying said input control signal.

13. (Original) The system according to claim 12, wherein said input control signal is generated by said user remotely from said system and transmitted to said system via wireless communication means.

14 – 17. (Canceled)

18. (Currently Amended) The system according to claim 17, An acoustic noise reduction system for reducing the effects of a noise source, comprising:

input transducer means for sensing the acoustic noise field generated by the noise source and for generating an input signal therefrom;

output actuator means for generating an acoustic output field that is effective to reduce the level of the acoustic noise field;

correction means for adjusting the input signal generated by said input transducer to compensate for the non linear characteristics of said input transducer and output actuator;

echo cancellation means for removing from the input signal a portion of the output of said output actuator means fed back through said input transducer means, the output of said echo cancellation means representing a signal corresponding to substantially the noise source by itself;

antinoise means for generating an antinoise signal opposite in phase to said input signal, said output actuator means generating said acoustic output field from said antinoise signal; and

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delay cancellation means for reducing the effect of echo signals caused by said antinoise means sensed by said input transducer, wherein said delay cancellation means comprises a digital filter whose output is added to the output of said antinoise means;

wherein said input transducer means is located in relatively close proximity to said output actuator means.

19. (Canceled)

20. (Currently Amended) The system according to claim 18, An acoustic noise reduction system for reducing the effects of a noise source, comprising:

input transducer means for sensing the acoustic noise field generated by the noise source and for generating an input signal therefrom;

output actuator means for generating an acoustic output field that is effective to reduce the level of the acoustic noise field;

correction means for adjusting the input signal generated by said input transducer to compensate for the non linear characteristics of said input transducer and output actuator;

echo cancellation means for removing from the input signal a portion of the output of said output actuator means fed back through said input transducer means, the output of said echo cancellation means representing a signal corresponding to substantially the noise source by itself;

antinoise means for generating an antinoise signal opposite in phase to said input signal, said output actuator means generating said acoustic output field from said antinoise signal; and

delay cancellation means for reducing the effect of echo signals caused by said antinoise means sensed by said input transducer, wherein said delay

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cancellation means comprises a digital filter whose output is added to the output of said antinoise means, wherein said digital filter comprises a finite impulse response (FIR) digital filter; and

wherein said input transducer means is located in relatively close proximity to said output actuator means.

21 - 27. (Canceled)

28 – 54. (Withdrawn)

55 – 56. (Canceled)